In the claims:

Claims 1, 2 and 3 canceled.

4. (previously amended) A steel member utilized for having joined surfaces of first and second steel members overlapped each other and fixing said first and second steel members with a pressure by a connecting member passing through connecting holes drilled in said first and second members, so as to join said first and second steel members, comprising:

a slip-proof surface having corresponding concentric recessed and projected parts each composed of a mountain-shaped portion and a valley-shaped portion having a corresponding radius of curvature, on a joined surface, which is formed by rolling dies having a rolling edge that has one or plural concentric edge parts on a conical incline each having a radius of curvature in a state where said conical incline is contacted to said joined surface in a direction perpendicular to said joined surface of said steel member and pressed by a prescribed pressure,

whereby a change of the radius of curvature of the edge parts from the inner edge to the outer edge thereof is preselected to a change of the radius of curvature of the corresponding concentric recessed and projected parts, and said joined surface is non-bent or non-curved to form said slip-proof surface.

5. (original) A steel member joining method for making the joined surfaces of a first and second steel members mutually overlap and fixing by pressure welding said first and second steel members by a connecting member passing through connecting holes drilled in said joined surfaces, and joining said first and second steel members, wherein;

with respect to the joined surfaces of said first and second steel members, before said fixing by pressure welding, a conical include is pressed against the joined surfaces of said first and second steel members by means of rolling dies forming a rolling edge that has one or plural concentric higher parts on said conical incline, so that a first and a second slip-proof surfaces having a pair of or plural pairs of concentric recessed and projected parts are formed on the joined surfaces of said first and second steel members respectively, and said first and second steel members are joined by mutually overlapping said first and second slip-proof surfaces as engaged so that said concentric recessed and projected parts of said first slip-proof surface is fitted to said concentric recessed and projected parts of said second slip-proof surface.

6. (original) A steel member joining method for making the joined surfaces of a first and a second steel members mutually overlap and fixing by pressure welding said first and second steel members by a connecting member passing through connecting holes drilled in said joined surfaces, and joining said first and second steel members, herein;

with respect to one of the joined surfaces of said first and second members, before said fixing by pressure welding, a rolling die forming a rolling edge that has one or plural concentric higher parts on a conical incline is rolled in the state where said conical incline is pressed against the joined surface of the above one steel member, so that a slip-proof surface having a pair of or plural pairs of concentric recessed and projected parts is formed on the joined surface of said one of the steel members, and said first and second steel members are joined by mutual overlapping said joined surfaces.

7. (previously amended) Steel members comprising:

first and second steel members to be mutually joined by having first and second joined surfaces thereof mutually overlapped and to be fixed with a pressure by a connecting member passing through first and second connecting holes drilled in said first and second steel members respectively, and wherein

with respect to the joined surface of said first steel member, before joining with first rolling dies having a rolling edge that has one or plural concentric edge parts on a first conical incline each composed of a mountain-shaped portion and a valley-shaped portion, having a radius of curvature, and extending from an inner edge to an outer edge, a first slip-proof surface having corresponding concentric recessed and projected parts composed of concentric mountain-shaped portions and grooved portions is formed around said connecting holes of said first steel member by rolling said first conical incline of said first rolling dies along with the locus of the concentric circle focusing said connecting holes;

with respect to the joined surface of said second steel member, before joining, with second rolling dies having a rolling edge that has on one or plural concentric edge parts on a second conical incline each composed of a valley-shaped portion alternating with said mountain-shaped portion of said first rolling dies and a mountain-shaped portion alternating with said valley-shaped portion of said first rolling dies, having said radius of curvature, and extending from an inner edge to an outer edge, a second slip-proof surface having corresponding concentric

projected and recessed parts composed of concentric grooved portions and mountain-shaped portions is formed around said connecting holes of said second steel member by rolling said second conical incline of said second rolling dies along with the locus of the concentric circle focusing said connecting holes;

when joining, said first and second steel members are joined with said first and second slip-proof surfaces overlapped wherein said mountain-shaped portions of said concentric recessed and projected parts of said first slip-proof surface is matingly fitted with said grooved portions of said concentric recessed and projected parts of said second slip-proof surface, and said grooved portions of said concentric recessed and projected parts of said first slip-proof surface is matingly fitted with said mountain-shaped portions of said concentric recessed and projected parts of said second slip-proof surface; and

said first and second steel members are non-bent or non-curved to form said first and second slip-proof surfaces.

8. (previously amended) Steel members comprising:

first and second steel members to be mutually joined by having first and second joined surfaces thereof mutually overlapped and then fixed with a pressure by a connecting member passing through first and second connecting holes drilled in said first and second steel members respectively, and wherein

with respect to the joined surface of said first steel member, before joining, with first rolling dies having a rolling edge that has one or plural concentric edge parts on a first conical incline each composed of a mountain-shaped portion and a valley-shaped portion, having a radius of curvature, and extending from an inner edge to an outer edge, a first slip-proof surface having corresponding concentric recessed and projected parts composed of concentric mountain-shaped portions and grooved portions is formed around said connecting holes of said first steel member by rolling said first conical incline of said first rolling dies along with the locus of the concentric circle focusing said connecting holes;

when joining, said first and second steel members are joined with said mountain-shaped portions of said concentric recessed and projected parts of said first slip-proof surface of said first steel member being embedded in a joined surface of said second steel member according to the pressure strength of said connecting member; and

said first and second steel members are non-bent or non-curved to form said first and second slip-proof surfaces.

Claim 9-10 canceled.

11. (previously amended) Steel members comprising:

first and second steel members to be mutually joined, wherein:

first and second connecting holes are drilled in the top end where said first and second steel members are mutually overlapped so as to pass through said first and second steel members;

with respect to the joined surface of said first steel member, with first rolling dies having a rolling edge that has one or plural concentric edge parts on a first conical incline each composed of a mountain-shaped portion a valley-shaped portion, having a radius of curvature, and extending from an inner edge to an outer edge, a first slip-proof surface having corresponding concentric recessed and projected parts composed of concentric mountain-shaped portions and grooved portions is formed around said connecting holes of said first steel member by rolling said first conical inline of said first rolling dies along with the locus of the concentric circle focusing said connecting holes;

with respect to the joined surface of said second steel member, with second rolling dies having a rolling edge that has on one or plural concentric edge parts on a second conical incline each composed of a valley-shaped portion alternating with said mountain-shaped portion of said first rolling dies and a mountain-shaped portion alternating with said valley-shaped portion of said first rolling dies, having said radius of curvature, and extending from an inner edge to an outer edge, a second slip-proof surface having corresponding concentric projected and recessed parts composed of concentric grooved portions and mounting shaped portions is formed around said connecting holes of said second steel member by rolling said second conical incline of said second rolling dies along with the locus of the concentric circle focusing said connecting holes; wherein:

when said first and second steel members are clamped by said connecting member passing through said first and second connecting holes, said first and second steel members are fixed by clamping in the thickness direction by said connecting member passing through said first and second connecting holes of said first and second steel members with said first and

second slip-proof surfaces overlapped wherein said mountain-shaped portions of said concentric recessed and projected parts of said first slip-proof surface is matingly fitted with said grooved portions of said concentric recessed and projected parts of said second slip-proof surface, and said grooved portions of said concentric recessed and projected parts of said first slip-proof surface is matingly fitted with said mountain-shaped portions of said concentric recessed and projected parts of said second slip-proof surface; and

said first and second steel members are non-bent or non-curved to form said first and second slip-proof surfaces.

Claims 12 through 16 canceled.